

Evaluating a Theory

Answer the following questions in complete sentences on a SEPARATE piece of lined paper

1. What observations were made to determine that eukaryotic cells first formed through endosymbiosis? *What could they actually see?*
 - Jeon experiment with amoebae and x-bacteria cooperation
 - Mitochondrion as a prokaryotic cell
 - Lynn Margulis experiment
2. What inferences were made? *What predictions were made based on the observations?*
 - That one prokaryotic cell was consumed by another
 - Two free-living bacterium merged with mutualism
 - Mitochondrion and chloroplasts were once free-living
3. What hypotheses, if any, were combined to form this theory?
 - Symbiosis
 - Single organism evolution
 - Endosymbiosis
 - Mitochondria and chloroplast evolution
4. What is the strongest aspect of the argument for this theory?
 - One of the four main subjects with at least one paragraph of explanation
5. What is the weakest aspect of the argument for this theory? *What does the case study fail to discuss?*
 - Mitochondrion or chloroplast development as a separate organism (in the case of this article)
6. Based on your answers to the previous questions, how complete of a theory do you think endosymbiosis is, as it relates to the formation of the first eukaryotic cell? Explain your reasoning.
 - For full credit, students must support their response with information from past five questions. Explanation must be at least one 5-6 sentence paragraph.